Bangalore Electricity Supply Company Limited

(CIN-U4010KA2002SGC030438)

Ref. No. :BESCOM/D(T)/GM(M&C)/2024-25/1659
Encl:

Corporate Office,
BESCOM, K.R. Circle,
Bangalore–560 001.
Date: 05/12/24

Clarification No.-1

Sub: Procurement & Commissioning of CT & PT Test bench equipment as per BESCOM specifications for the use in MT divisions BMASZ, BRAZ & CTAZ of BESCOM.

Ref:
1. Paper Notification dated 15.11.2024.
2. KPP portal tender No.BESCOM/2024-25/IND-0076/CALL-2.
3. Pre-bid meeting held on 28.11.2024.

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The following clarifications pertaining to subject bid enquiry is herewith issued consequent to request from the prospective bidders and deliberations during pre-bid meeting:

Sl. No.	As existing Clause No.	Clarifications/amendments sought by the firm	BESCOM Clarifications
VT TEST BENCH:			
1	**1.3 Constructional features for Voltage transformer test bench** **b)** 3. Standard voltage transformer **63KV** 5. Voltage measuring bridge (**Common** comparator) **1.7 Standard Voltage Transformer** With the voltage ranges • U_{Nprim}: 22-**63kV** Another standard voltage transformer • U_{Nprim}: **6.6-21kV**	Multi ratio Std PT should be of 440V, 6.6kV, 11kV, 22kV & 33kV. Secondary 110V, 63.5V Accuracy 0.05 class at lead burden. Please Include 440V/110V & 440/^3/ 110/^3 as it is commonly used in BESCOM Distribution Network all over Karnataka.	**1.3 Constructional features for Voltage transformer test bench** **b)** 3. Standard voltage transformer **440V, 6.6KV, 11KV & 22KV** 5. Voltage measuring bridge (**Separate** comparator) **1.7 Standard Voltage Transformer** With the voltage ranges • U_{Nprim}: 22-**33kV** Another standard voltage transformer • U_{Nprim}: **440V, 6.6KV, 11KV, 21KV.**
2	-	The VT system is only for testing Voltage Transformers (VTs). So no CT Testing ratio panel etc is applicable.	Tender condition prevails.
3	**Technical Specification of fully automatic instrument transformers (PT) test bench. 1.8 Standard Voltage Burden (4).** The Potential transformer Burdens shall be rated for continuous operation and are rated for 190% rating on rated	Switch type Burden will be provided for 3 phase combined testing to connect to other phases which are not under testing. Please delete/amend. (all three Burdens should be identical type and not switch type for the phases that are not under	Tender condition prevails.

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	connected burden for short term rated voltage. Switch type burdens shall be provided for 3 phase combined PT testing to connect appropriate burden for other 2 phases which are not under testing.	test)	
4	**Details of PT testing system test bench 1.1 PT testing system** 6. Single Phase High Voltage Breakdown tester (0-100 KV) test Kit 7. AC High Voltage Test unit 0-5 KV AC 8. Digital Insulation Tester.	Delete items no.6,7& 8- Not applicable	Tender condition prevails. (Standard material shall be supplied)
5	**2.3 Constructional features for current transformer test bench.** 1. Voltage regulating transformer **(used for current testing both)**	Voltage regulating transformer (used for both current and voltage transformer testing)- please delete separate independent voltage source with controls to be provided for each VT System. No common controls or transformer.	**2.3 Constructional features for current transformer test bench.** 1. Voltage regulating transformer **(used for current testing & PT testing must be separate).**
6	**Details of PT testing system test bench** **1.9** Single phase high voltage break down tester 0-100KV test kit. **1.10** AC high voltage test unit 0-5KV. **1.11** Digital insulation tester	1.9,1.10,1.11- Please delete	Tender condition prevails. (Standard material shall be supplied)
7	**2.12 (1)** • Power frequency Dry withstand tests on Secondary winding. • Over voltage inter-turn test . • Insulation resistance test.	2.12- Power frequency Dry withstand test, Over Voltage interturn test, Insulation resistance test- Please delete.	Tender condition prevails.
8	**2.16 Safety aspect** During test regulation for safety operation should be observed, acc. to IEC61010.	During test regulation as per IEC 61010-Please delete.	Tender condition prevails.
9	**2.16 Safety aspect** Supplier shall provide one voltage annunciating device for operator which beep when operator is neat to high voltage area.	Supplier shall provide one voltage annunciating device for operator which beep when operator is neat to high voltage area.	Tender condition prevails.
10	**1.5 Measuring bridge for voltage transformer testing** Built in Programmable divider to match the VT ratio which are not available in the standard voltage transformer value of divider 0.9 to 1.	Programmable divider to match the VT ratio which are not available in the standard voltage transformer value of divider 0.9 to 1-Please delete- Not applicable.(All Comparators only compare Std VT and test VT of same nominal ratios. Secondary voltages are only 110V & 63.5V. No other Secondary	Tender condition prevails.

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		voltages are applicable in Karnataka Distribution Network. Non standard ratio comparison is not applicable.) The Std. VT provided has multiple ratios covering all the ratios needed by BESCOM and other Distribution circles.	
11	**1.5 Measuring bridge for Voltage transformer testing:** Controlling by front inbuilt touch display and by PC software shall also be possible.	Touch screen display: Optional Front panel keypad to be provided. (Please note that for continuous testing, touch screen display is not advisable. If touch option does not work equipment cannot be used for testing.	Tender condition prevails.
12	**1.3 Constructional features for Voltage transformer test bench** b) 5. Voltage measuring bridge (**Common** comparator).	The comparator used in the PT test bench /PT test bench should have facility to test CT as well as PT- This is useful if one of the units (comparator) is under calibration, another unit can be used.	**1.3 Constructional features for Voltage transformer test bench** b) 5. Voltage measuring bridge (**Separate** comparator).
13	-	We recommend to add CTPT analyser as an integral part along with each bench. This can be used to pre check the CT and PT before connecting it on actual bench. This is very useful to test old CT /PT- This as a unique feature of 'name place guess' as on old CT/PT sometimes the name plate gets erased.it is difficult to know the parameters.	Cannot be considered
CT TEST BENCH:			
14	**2.3.1.Constructional features for current transformer test bench** All components for instrument current transformer testing shall be provided as below. 1. Voltage regulating transformer **(used for current transformer testing both)**	Voltage regulating transformer (used for both current and voltage transformer testing)- please delete Separate independent current source with controls for CT System to be provided. No common controls or transformer.	**2.3 Constructional features for current transformer test bench.** **1.** Voltage regulating transformer **(used for current testing & PT testing must be separate)**
15	**2.5 Standard Current Transformer:** Secondary current(In) 1A & 5A **(both 1A & 5A terminals shall be separate)**	Standard CT: Secondary current: 5A Amend to Std CT provided should be suitable for testing both 1A & 5A CTs.	**2.5 Standard Current Transformer:** Secondary current(In) 1A & 5A **(Provision for measuring both 1A & 5A)**
16	**2.8.1 Measuring bridge for current transformer testing:** Built in Programmable divider to match the CT ratio which are not available in the standard current transformer, value of divider 0.9 to 1.	Programmable Divider to match the CT ratio which are not available in the standard current transformer value of divider 0.9 to 1. Please delete Not applicable. (All comparators only compare Std CT and test CT of same nominal ratios. No non-standard ratio comparison is applicable.) The Std CT provided as multiple	Tender condition prevails.

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		ratios covering all the ratios needed by BESCOM and other Distribution circles.	
17	**2.8.1 Measuring bridge for current transformer testing:** Controlling by Inbuilt front touch display and by PC software shall also be possible.	Touch screen display: Optional Front panel keypad to be provided. (Please note that for continuous testing, touch screen display is not advisable. If touch option does not work equipment cannot be used for testing.	Tender condition prevails.
18	**2.9 Test** 2. Power frequency Dry withstand Tests on Secondary winding. 3. Over voltage inter-turn test. **5.** Insulation resistance Test.	2.9-2,3 &5 Please delete-Not applicable	Tender condition prevails.
19	**2.9 Test** 4. Determination of error or other characteristics according to the requirement of the appropriate designation or accuracy class.	Other characteristics- Please delete- NA (our CT PT Comparator has all the latest IS/IEC/ ANSI CT standards programmed for Accuracy testing) 44	Tender condition prevails.
General Conditions			
20	**IFB Clause No.1.** Procurement & Commissioning of CT & PT Test bench for MT Divisions BMASZ, BRAZ & CTAZ of BESCOM.	Please confirm the three locations for the CT & VT system.	It will be intimated at later date after finalization of tender (Locations will be within BESCOM jurisdiction).
21	**IFB Clause 1.1(3):** Amount put to tender	The total tender amount is inclusive or exclusive of GST. The Estimated tender price is inclusive of all Taxes and duties or Exclusive of taxes.	The amount put to tender is inclusive of all taxes.
22	**2.16 General Conditions:** For CT test bench. **2.19 General Conditions:** For PT test bench.	The Eltel CT and VT systems are quoted with 5 years warranty at site. During the warranty period any breakdown calls /email will be attended within 2 days of receipt of intimation (except long weekends/holidays).The repair /rectification will be carried out free of charge at no cost implication to BESCOM. Individual components /modules will be rectified and made operational. we are unable to provide a complete CT/PT Rack System as stand by as it is needed.	Tender condition prevails.
23	**ITB Clause 22.8:** Cyber Security Conformance - Protocols, Standards & Testing Laboratories. • The successful bidder shall strictly adhere to MoP, GoI order No. 12/34/2020-T&R dated 08.06.2021. • The successful bidder	Cyber security conference /protocol etc: The quoted VT Test system and CT Test system are offline testing systems. The test CTs/PTs Ratio Error /Phase Error Accuracy measurements are carried out without any Internet /Wifi connections. These are not for our system and so they may be deleted. We have given the	Cyber security conference /protocol etc required for VT Test system and CT Test system. The test CTs/PTs Ratio Error /Phase Error Accuracy measurements must be made available at the required portal prescribed by BESCOM in future.

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	shall follow the protocols as listed below (if applicable) for Cyber Security conformance testing in order to protect sensitive and critical infrastructure.	documentation.	
24	**ITB Clause 22.8: Cyber Security Conformance - Protocols, Standards & Testing Laboratories.**	**Remove Terminal Units (RTUs) & PLCs**- Not applicable for this CTPT testing tender. **Intelligent Electronic equipment, Relay/ Bay control units etc-** Not applicable for this CTPT testing tender. **Smart Meters-** Not applicable for this CTPT testing tender. **IT related products-** Not applicable for this CTPT testing tender.	Not Required
25	**1.4 Qualifying Requirements:** The tenderer should furnish the information on all past supplies and satisfactory performance for the materials supplied to any DISCOMs/ Electrical utilities/ Electricity Boards in India. **Documents to be uploaded by the tenderer.** Performance certificate issued by an officer not below the rank of Executive Engineer(El) or equivalent. Details of satisfactory performance shall be uploaded in the prescribed format as per **Annexure-3.**	Please allow performance certificates from any officers as sometimes there is no designation such as 'Executive Engineer' and then it becomes difficult to decide.	Tender condition prevails.

All other terms & conditions of the subject tender remain unaltered.

(Yogesh.B.K)
General Manager (Ele.),
Meters & Commercial
BESCOM